

AAAAAAAAA A

1828

<210> 2

<211> 458

<212> PRT

<213> Babesia caballi

<400> 2

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 35 40 45
 Ile Cys Ser Gln Val Pro Lys Gly Ser Asn Cys Ser Ala Ser Val Ser
 50 55 60
 Ala Tyr Met Ser Arg Cys Ala Lys Gln Asp Cys Leu Thr Leu Gln Ser
 65 70 75 80
 Leu Lys Tyr Pro Leu Glu Ala Lys Tyr Gln Pro Leu Thr Leu Pro Asp
 85 90 95
 Pro Tyr Gln Leu Glu Ala Ala Phe Ile Leu Phe Lys Glu Ser Asp Ala
 100 105 110
 Asn Pro Ala Asn Ser Thr Glu Lys Arg Phe Trp Met Arg Phe Arg Arg
 115 120 125
 Gly Lys Asn His Ser Tyr Phe His Asp Leu Val Phe Asn Leu Leu Glu
 130 135 140
 Lys Asn Val Thr Arg Asp Ala Asp Ala Thr Asp Ile Glu Asn Phe Ala
 145 150 155 160
 Ser Arg Tyr Leu Tyr Met Ala Thr Leu Tyr Tyr Lys Thr Tyr Thr Asn
 165 170 175
 Val Asp Glu Phe Gly Ala Ser Phe Phe Asn Lys Leu Ser Phe Thr Thr
 180 185 190
 Gly Leu Phe Gly Trp Gly Ile Lys Arg Ala Leu Lys Gln Ile Ile Arg
 195 200 205
 Ser Asn Leu Pro Leu Asp Ile Gly Thr Glu His Ser Val Ser Arg Leu
 210 215 220
 Gln His Ile Thr Ser Ser Tyr Lys Asp Tyr Met Asp Thr Gln Ile Pro

225					230				235				240			
Ala	Leu	Pro	Lys	Phe	Ala	Lys	Arg	Phe	Ser	Leu	Met	Val	Val	Gln	Arg	
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Leu	Leu	Ala	Thr	Val	Ala	Gly	Tyr	Val	Asp	Thr	Pro	Trp	Tyr	Lys	Lys	
				260				265				270				
Trp	Tyr	Met	Lys	Leu	Lys	Asn	Phe	Met	Val	Asn	Arg	Val	Phe	Ile	Pro	
				275				280				285				
Thr	Lys	Lys	Phe	Phe	Asn	Lys	Glu	Ile	Arg	Glu	Pro	Ser	Lys	Ala	Leu	
				290				295				300				
Lys	Glu	Lys	Val	Ser	Thr	Asp	Thr	Lys	Asp	Leu	Phe	Glu	Asn	Lys	Ile	
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Lys	Ala	Leu	Lys	Glu	Lys	Val	Ser	Asn	Asp	Ala	Lys	Asp	Leu	Phe	Glu	
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Ser	Thr	Glu	Ala	Asp	Asn	Leu	Leu	Glu	Lys							
				450				455								

CLAIMS

1. A gene encoding a protein from merozoite of *Babesia caballi*.

2. The gene of claim 1 wherein said protein is a
5 protein that has the amino acid sequence shown in SEQ ID
NO: 2, or a protein that has the amino acid sequence shown
in SEQ ID NO: 2 with one to several amino acid residues
therein being deleted, substituted or added and that is
immunologically reactive with an antibody or antiserum
10 elicited by a 48kDa protein of rhoptry of *Babesia caballi*
merozoite.

3. The gene of claim 1 or 2 wherein said gene has
the nucleotide sequence shown in SEQ ID NO: 1, or has a
nucleotide sequence that hybridizes to a complementary
15 sequence to the nucleotide sequence shown in SEQ ID NO: 1
and encodes a protein that is immunologically reactive with
an antibody or antiserum elicited by a 48kDa protein of
rhoptry of *Babesia caballi* merozoite.

4. A recombinant protein from merozoite of *Babesia*
20 *caballi*.

5. The recombinant protein of claim 4 wherein said
protein has the amino acid sequence shown in SEQ ID NO: 2,
or has the amino acid sequence shown in SEQ ID NO: 2 with
one to several amino acid residues therein being deleted,
25 substituted or added and is immunologically reactive with